

Take-away Points from the High-Level Expert Group on the Measurement of Economic Performance and Social Progress Workshop on Intra-generational and Inter-generational Sustainability

This note summarises the main points made by speakers at the Rome workshop, and is based on the more detailed notes that they submitted to the OECD Secretariat following the discussions in Rome.

General points on the ‘capital approach’ to sustainability

- Capital accounts provide only a ‘snapshot’ of current conditions: to assess sustainability it’s important to also assess the *changes* in the various balance sheets items. This requires focusing on streams and processes, in addition to stocks.
- The promises of a simple ‘capital approach’ to sustainability (i.e. looking at balance sheets for different types of capital, all expressed in monetary terms, for each country, and assessing whether they are improving or not) cannot be fulfilled in many cases. For example, in the case of trans-boundary assets (e.g. climate system), the assessment of the sustainability of a country’s development path cannot be limited to the capital stocks as measured within each country, but account should be taken of the country’s contribution to maintaining or depleting capital related to the provision of global public goods. Similarly, even if science could identify ‘tipping points’ whose crossing would lead to huge effects on people’s well-being, monetary valuation of various types of capital would need to reflect the physical proximity to such thresholds, which would be challenging in the presence of large (non-marginal) changes. Similarly, in the presence of risks and uncertainty (and in the absence of markets by which these risks can be transferred within and between generations), there are deep questions about what is meant by sustainability: it becomes a probabilistic concept, and the question is, how do we decide the appropriate probability threshold for judging sustainability. In these and other cases, there is a difficult challenge to ensure that monetary valuations of the various types of capital, reflect those that would emerge from societal deliberations on the values and trade-offs between valuable goals rather than those of the experts involved in the assessments.
- In the presence of intra-generational inequalities, an assessment of ‘sustainability’ cannot rely only on the notion on non-declining aggregate capital stocks but needs to consider the life-time conditions of people in different circumstances and how those might be affected by different underlying compositions of that aggregate. The question then becomes: given a particular inequality averse social welfare function, is there a set of shadow prices by which the existing assets can be valued, such that if wealth measured, using these prices, is non-declining, then social welfare is sustainable?
- Assessing sustainability in terms of the ‘capital approach’ requires reconsidering conventional distinctions between consumption and investment activities. For example, expenditure flows that contribute to the building up of societies’ human, social or cultural capital (e.g. training of teachers) will enhance societies’ long-term sustainability, rather than simply representing final or intermediate consumption as assumed in the System of National Accounts.

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Considerations on the measurement of different types of capital

Economic capital

- Comparisons of (gross) public debt to GDP are incomplete measures of the ‘economic sustainability’ of a country: private wealth should also be considered, alongside the assets and liabilities (explicit and implicit, e.g. those linked to pension promises) of the public sector. One of the reasons for this is that the tax base upon which the government can draw for meeting its liabilities depends on the net wealth of the private sector. Another is that private liabilities can easily be converted into public liabilities. At the same time, using measures of net government debt would require that assets and liabilities are valued on a comparable basis: for example, even when estimates could be made of replacement costs, or of the present discounted value of revenues which might be generated from these assets were user charges imposed, what the government might receive in a privatization might be markedly less and there may be political constraints either on privatization or the imposition of user charges. It should also be noted that certain government activities may provide benefits to the society as a whole (they may be public goods or the provision of commodities generating large externalities): the value of these benefits may bear little relation to the cost of the assets providing these services (unlike the private sector, where in equilibrium, marginal benefits equal marginal costs).¹
- There is no firm threshold for public debt beyond which we should expect GDP growth to fall significantly. Even studies showing correlations between the two tell us nothing about causality: the only real test of the sustainability of public debt is the market (i.e. the ability to sell government bonds), which is itself a function of the institutional set up of different countries (such as the ability of monetary policy to maintain low interest rates). There is also evidence that much of the relation between public debt and GDP growth runs from (low) growth to (high) public debt rather than the other way around.
- Inheritances are a key component of households ‘economic capital’, with implication for both growth and equity: they should be measured systematically in household surveys, through (recurrent) questions on how specific items (e.g. dwellings) have been acquired or through (more detailed and less frequent) questions on bequests received or expected.
- Infrastructure (both physical and immaterial) is a key component of economic capital: foregoing investment to maintain and develop such infrastructure may undermine sustainability even if such investment were to increase gross public debt.

More detailed balance sheets of financial firms and other institutional sectors are critical to understand risks and vulnerabilities: NSOs should step up efforts to compile such balance sheets quarterly, breaking down financial assets and liabilities of one sector, for example, the distribution of the assets and liabilities of one sector (e.g. households) across other sectors (e.g. financial intermediaries, firms, rest of the world). But aggregate data will not suffice. One has to have information in a form that allows assessing what fraction of firms will face financial stress and the importance of these firms in the economy.

¹ If one were confident that the government similarly optimized the provision of public goods, then of course the social marginal benefit would equal the net marginal cost, taking into account the social costs associated with any marginal distortions from raising the revenues required to provide the public good.

- Better indicators should be compiled to measure different types of risk (liquidity, solvency, maturity, currency, overexposure, contingencies and guarantees), and their concentration on specific segments. In this respect, considerable progress is (being) made in the context of the G20 Data Gaps Initiative, for example in emphasising the importance of having more and better information on how the assets and liabilities of one sector match those of others, as well as on currency and maturity mismatches. However, all of this requires very granular information, thus making the improvement of the link between macro-data and micro sources all the more important. It should also be noted that a clear conceptual framework for capturing risks at a macro-level is still missing, especially one which also takes into account the possible coverage of certain risks by futures and/or derivatives, and/or the possible exposure to risks which cannot be derived from granular data on various mismatches.
- Consideration may also need to be given to whether existing SNA conventions lead to considering higher risks as adding to the value added of financial services. This is reflected in an ongoing discussion about the measurement of financial intermediation services indirectly measured (FISIM). Financial intermediaries assume risks; hence the core question is whether higher risk premiums legitimately increase their output, or whether risk is borne by other sectors or society at large and should not be reflected in the output of the financial sector. Doing so, one should make a clear distinction between developments in current prices and in constant prices.

Natural capital

- Capital accounts should be compiled more systematically for non-produced, non-financial assets. One example is sub-soil assets. Despite their importance for economic sustainability in a number of countries, their measurement (in terms of both quantities and prices) is far from complete. Valuations of stocks should reflect the price of the resource *in situ* (before extraction); further, statements about sustainability require tracking the evolution of the total stocks of these assets, both discovered and undiscovered.
- Another example of natural assets that are not well measured is land. Priority should be given to measuring land, tracking both quantities and prices of different types of land. Prices for land underlying dwellings were the main drivers of bubbles and busts in real estate markets and played an important role in the financial crisis.

Human capital

- While there is wide-spread agreement about the importance of maintaining and increasing human capital to ensure sustainability, there continue to be discussions on the best way to measure it, and on the pros and cons of different methods (e.g. indicators or a monetary measure of a single stock). The pros and cons of different methods are also likely to depend on the specific question being addressed: for example, measures of the stock on human capital based on the ‘life-time income approach’ (the discounted value of the income streams that education is likely to generate in the future) at a point in time are likely to be less useful to explain future growth of GDP and productivity because the (real) service flows from that stock are themselves measured as a function of the income streams expected in the future.

- As an alternative to full-fledged human capital accounts based on the ‘life-time income approach’, summary measures of the stock of human capital may be based on some combination of indicators and monetary measures. For example, the stock of human capital in a country may be measured as a weighted average of the mean years of schooling of different segments of the population (including those that are currently inactive), with weights based on estimates of the ‘rates of return to schooling’ for various educational categories used to capture ‘quality’.
- The measurement agenda on human capital remains large. For example, ‘rates of return to schooling’ should be extended to capture non-monetary returns (such as the longer life expectancies of better educated people). ‘Quality’ of education could also be captured through scores of students’ and adults’ skills (cognitive and non-cognitive), possibly converted into ‘years of schooling’ equivalents.

Social Capital

- Social norms (such as trust) are a key component of social capital. While most measures of norms are based on self-reports, these are only weakly related to how people behave. Improved measures can be derived by putting people in decision-making settings that mimic real conditions: these tools can be applied to large samples based on existing protocols.

Cultural capital

- Culture may be conceived as an asset transmitted across generations, with implications for future well-being and equity. Cultural capital takes different forms. Individual cultural capital contributes to human capital (e.g. competencies) both through the ‘objects’ and ‘practices’ transferred by parents to children. Collective cultural capital encompasses those dimensions of a society that are bequeathed to future generations: indicators should be developed starting from a more restricted definition of ‘cultural goods’ such as museums, landscapes and historical sites.

Linkages between current conditions and sustainability

- Beyond its immediate costs, the crisis is having large and ‘hidden’ costs that will affect the well-being of future generations (in particular, youths and children living today). The lowering of future growth associated with a recession can be explained only partly by the lower level of investment in physical goods. Part of it is a lower amount of human capital, as a result of lower levels of “experience,” offset in part by an increase in education. But there remains a large unexplained component, “missing capital.” It is important to attempt to identify the components of this missing capital.
- At the macro-economic level, some of these long-term costs operate through labour markets (permanent withdrawals from the labour force; skills lost when not used; lower entry-positions, reflected in lower wages, for educated youth permanently affecting their careers). Other effects operate through non-replacement of productive capacity, lower investments and productivity growth. Because of these effects, recessions affect the path of potential output rather than simply increasing ‘output gaps’.
- At the individual level, macro-economic downturns have effects on health conditions which have long-term consequences that are not made up during good times. Also, a combination of [pre-recession] reference points and loss aversion imply that people give more weight to negative changes than to gains of the same size.

- At the societal level, the social tensions created by crisis are sharpened and crystallised by ‘political entrepreneurs’ in extremist parties, which lead mainstream parties to modify their position in response: this makes it more difficult to find common ground when the crisis ends. One may think of this as a decrease in the amount of social capital.
- Current conditions that increase people’s sense of ‘economic insecurity’ may lead to stress and anxiety, making it harder for people to invest in emotional capital.
- Cohort data tracking people over time are needed to distinguish between temporary and persistent poverty, and to assess their different effects on people’s long-term well-being. Such data are important for the inter-generational analysis of both income and multi-dimensional poverty (where they require data-sources reflecting the joint distribution of disadvantages of the poor).
- When long-term panel data are not available, intergenerational analysis of multidimensional poverty can be based on datasets that include information on both parents and children in the same survey, or based on identity markers to identify marginalised groups. Data should be compiled to capture the long-term effects of different forms of deprivation.

Implications for modelling

- Modelling and scenarios provide valuable evidence to guide the choices that societies have to make to achieve sustainability, and models will likely become increasingly important to assess interactions between different types of capital and its determinants.
- Macro-economic models should reflect the joint determination of the paths of output and public debts by interest rates and the primary balance: this implies recognising that monetary policy and budget rules cannot be set independently of each other, and that fiscal consolidation in a recession may have large effects in terms of further reducing growth and limited effects in terms of debt reduction (possibly further increasing it). The assignment of instruments to institutions and goals can affect the dynamic stability and efficiency of the economy.
- Macro-economic models should also highlight the path that private demand is expected to follow under a given configuration of policy instruments, and the need to adjust such instruments when the path of private demand is inconsistent with macro-economic goals of full employment and price stability.